EXPERIMENTAL FARM NOTES

No. 1.

THE GERMINATING POWER

OF

GRAIN GROWN IN CANADA

DURING THE

SEASON OF 1893

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THE GERMINATING POWER OF GRAIN GROWN IN CANADA DURING THE SEASON OF 1893.

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The question as to the vitality and germinating power of seed grain is a most important one for farmers, and associated with this is that of the relative vigour of the young plants after the seeds have started. These qualities in the seed will necessarily have a large influence on the crop of the coming year.

The testing of the germinating power and vigour of samples of grain grown in the several provinces of the Dominion during 1893 began on the 9th of December, 1893, and since that date 1,153 samples have been placed under test. The testing is conducted in duplicate ; in one case the grain is planted in the soil, in the other in a suitable apparatus between folds of linen kept constantly moist. With 686 samples the tests are now completed, and while thus far the average vitality stands higher than in the crop of 1892, which is very gratifying, there is, nevertheless, a serious drawback in connection with the samples of barley which have been received from Manitoba, the North-west Territories, New Brunswick and Quebec in the unusually large proportion of plants of weak growth. The percentage is small in the samples from Prince Edward Island, Nova Scotia, Ontario and British Columbia.

The following table shows the number of tests thus far completed in each of the provinces of the Dominion with wheat,

barley and oats, giving the highest, lowest and average percentages of vitality, also the proportion of plants of strong and weak growth :

ONTARIO.

Kind of Grain.	Number of Tests.	Highest Percentage.	Lowest Percentage.	Percentage of Strong Growth.	Percentage of Weak Growth.	Average Vitality.
Wheat	41	100·0	69·0	90·5	3·5	94·0
Barley	54	100·0	50·0	79·0	13·5	92·5
Oats	50	100·0	84·0	92·9	4·0	96·9

QUEBEC.

Wheat	68	100·0	60·0	85·3	5·0	90·3
Barley	107	100·0	47·0	54·6	33·5	88·1
Oats	50	100·0	63·0	89·9	3·5	93·4

MANITOBA.

Wheat	14	100·0	28·0	89·2	2·2	91·4
Barley	5	99·0	75·0	31·2	61·2	92·4
Oats	16	100·0	50·0	87·6	6·7	94·3

NORTH-WEST TERRITORIES.

Wheat	3	98·0	96·0	85·5	11·5	97·0
Barley	3	99·0	98·0	44·6	54·0	98·6
Oats	12	100·0	60·0	86·2	7·0	93·2

NOVA SCOTIA.

Wheat	12	100·0	59·0	82·4	5·0	87·4
Barley	30	100·0	63·0	76·8	11·7	88·5
Oats	49	100·0	52·0	85·6	5·9	91·5

NEW BRUNSWICK.

Kind of Grain.	Number of Tests.	Highest Per-centage.	Lowest Per-centage.	Percent-age of Strong Growth.	Percent-age of Weak Growth.	Average Vitality.
Wheat	22	100·0	54·0	83·3	4·6	87·9
Barley	18	99·0	76·0	38·1	53·7	91·8
Oats	75	100·0	78 0	90·9	5·3	96·2

PRINCE EDWARD ISLAND.

Wheat	13	97·0	59·0	82·6	5·7	88·3
Barley	5	96·0	84·0	87·2	4·2	91·4
Oats	19	100·0	76·0	86·6	6·1	92·7

BRITISH COLUMBIA.

Wheat	6	100·0	96·0	91·4	6·0	97·4
Barley	7	100·0	96·0	97·1	0·9	98·0
Oats	8	100·0	94·0	95·6	1·2	96·8

RECAPITULATION.

Kind of Grain.	Number of Tests.	Highest Per-centage.	Lowest Per-centage.	Average Strong Growth.	Average Weak Growth.	Average Vitality.
Wheat	178	100·0	28·0	86·4	4·5	90·9
Barley	229	100·0	47·0	63·4	26·7	90·1
Oats	279	100·0	50·0	89·6	5·0	94·6
Total	686	Average vitality of the whole				91·9

It is doubtful if any other country in the world could show so high an average as 91·9 per cent in 686 tests of samples received

indiscriminately from all parts of its territory, especially since many of these were sent because they were suspected of being deficient in germinating power.

The provinces and territories at present stand thus in order of merit :

	No. of Samples Tested.	Average Vitality.
British Columbia	21	97·4
North-west Territories	18	96·3
Ontario	145	94·5
Manitoba	35	92·7
New Brunswick	115	92·
Prince Edward Island	37	90·8
Quebec	225	90·6
Nova Scotia	91	89·1

The fact that in this series of tests samples of wheat have gone as low as 28 per cent, barley 47 per cent, and oats 50 per cent, should be sufficient to induce those farmers who are holding seed of doubtful vitality for spring sowing to send samples at once to the Central Experimental Farm so that they may be tested and reported on before the time for seeding arrives. These samples are tested free of charge, and the reports of the results can usually be sent within two weeks from the date of receipt of the samples. About one ounce of the grain is sufficient for the test, and the samples can be sent from any part of the Dominion to the Central Experimental Farm through the mail free.

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